LIEBHERR-WERK EHINGEN GMBH

LICCON

Work Planner

User And Reference Manual

4 Installation

4.1 Installation of the program

The data of the LICCON work planner program are being supplied in compression volume on CD-ROM. The installation program performs automatically all measures required for the application of the LICCON work planner without any problem and stores the program in the directory **<Drive>:\Programs\LIKAPLAN**.

Should your system already contain an older version of the LICCON work planner, it is not necessary to delete it before the new installation.

Now perform the following steps in order to start the installation:

- Make sure before the installation that no other applications are running.
- Insert the LICCON work planner CD into the CD-ROM drive.
- The installation starts automatically as soon as the CD-ROM is inserted into the disk drive.

  If it does not start, start the installation manually. On the Windows taskbar, click "**Start**" and then click "**Run**...". Click "**Browse**..." and select "**CD-ROM**". If it is not on the list, use the "Look in" pull down menu to locate it. Select "**Intro.exe**" and click "**Open**". Click **"OK"**.
- Then follow the instructions of the installation program.

After the installation has been completed without errors, the computer must be rebooted. This will be executed automatically by the installation program on request.

The installation can be installed three different ways. To do so, you will be requested by the program to select between the following possibilities:

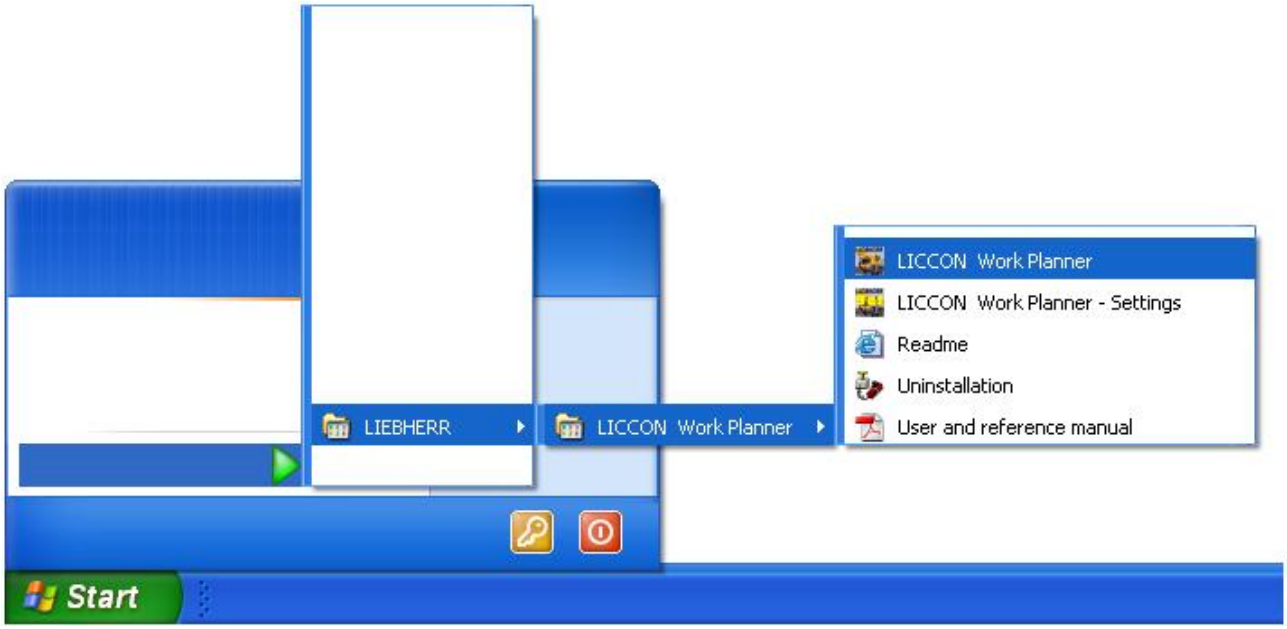
- Standard Installation
- Server Installation (User defined)
- Client Installation (User defined)

If a firewall is activated on the computer, on which a standard, server or client installation is carried out, then Port 2809 must be available!!!

4.4 Starting the LICCON Work Planner

4.4.1 Start at Standard installation

At program installation, a link (icon) is set up both on the desktop and in the start menu/programs /LIEBHERR/LICCON Work Planner. You can start the LICCON Work Planner by clicking on one of these links.



8.1 Edit crane listing

Double click on a crane to take it over into the current crane list or double click in the current crane list to remove the crane again.

8.2 Load case data

Here you enter the pertinent values for the load, the radius and the height.

8.3 Optimizing parameter

8.3.1 Intrusion contour

If you mark this option, a previously entered intrusion contour entered into the planner is considered for the selection. During the check if a collision with the intrusion contour is present, the boom, jibs, guy brackets and cables and the ballast of the cranes is taken into consideration.

9.5 End load capacity program

Click this symbol to end the load capacity program.

10.2.3.1.3 Maximum load

Display of the maximum load (3), which the crane can lift based on the set chart and reeving in the current position; the numbers in front of the comma are written in large numbers and the first number after the comma is written as a small number.

10.2.3.1.4 Maximum load at optimum derrick ballast

(Display on machines with derrick ballast)
Display of maximum load bearing force (4), which the crane can lift in the current crane position, when the optimum derrick ballast is placed. This load is also described with „max3“ below:

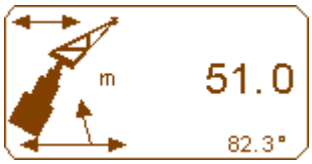
From a certain pulled derrick ballast weight, the displayed maximum load (5) is equal to the maximum possible load „max3“ (4). Even if still more derrick ballast is pulled, the load will not be increased further. This certain pulled derrick ballast is described as the „optimum derrick ballast“.

10.2.3.1.5 Maximum load at current derrick ballast

(Display on machines with derrick ballast)
Display of maximum load (5), which the crane can lift with the currently pulled derrick ballast.

From a certain pulled derrick ballast weight, the displayed maximum load (5) is equal to the maximum possible load „max3“ (4). Even if still more derrick ballast is pulled, the load will not be increased further..

10.2.3.2 Working radius symbol



The current working radius, measured from the center of the slewing ring, and the current telescopic angle is shown in this symbol. Dynamic influences, such as flexure, cannot be taken into account in this work planner program.

The 2-D planner in the work planner allows radii which are less than or greater than the radii specified in the chart for simulation.

The planning should not be based on data (jib angle, radius) which yield these smaller or greater radii. Only radii which are specified in the chart can be guaranteed for operation of the crane.

Background:

The following charts show an overview of the various MRT adjustment possibilities.

This chart is only valid for **LTR 11200** !

Code	Crawler mounted	Support mounted	Support base	Crane mounted on	Miscellaneous
A	Narrow track	Yes	10,5m x 10,0m	Support	
B	Narrow track	Yes	10,5m x 10,0m	Crawler	
C	Narrow track	Yes	13,0m x 13,0m	Support	
D	Narrow track	Yes	13,0m x 13,0m	Crawler	

This chart is only valid for **LR 1600/2-W** !

Code	Crawler mounted	Support mounted	Support base	Crane mounted on	Miscellaneous
A	Narrow track	Yes	17,5m x 10,0m	Support	
B	Narrow track	Yes	17,5m x 10,0m	Crawler	
C	Narrow track	Yes	14,0m x 14,0m	Support	
D	Narrow track	Yes	14,0m x 14,0m	Crawler	

This chart is only valid for **LR 1400/2** and **LR 1400/2-W** !

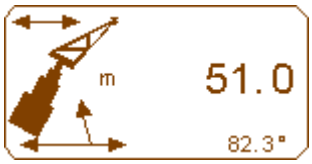
Code	Crawler mounted	Support mounted	Support base	Crane mounted on	Miscellaneous
A	Narrow track	Yes	11.5m x 11.5m	Support	
B	Narrow track	Yes	11.5m x 11.5m	Crawler	
C	Narrow track	Yes	3.6m X 15.4m	Support	
D	Narrow track	Yes	3.6m X 15.4m	Crawler	
E	Standard	Yes	11.5m x 11.5m	Support	
F	Standard	Yes	11.5m x 11.5m	Crawler	
G	Standard	Yes	3.6m X 15.4m	Support	
H	Standard	Yes	3.6m X 15.4m	Crawler	
I	Standard	No	--------	Crawler	

This chart is only valid for **LR 1750**!

Code	Central ballast	Crawler installed	Support installed	Crane is on	Other
A	95/45/20t	Yes	No	Crawler 9,1m x 8,8m x 1,5m	
B	20 t	Yes	Yes	Crawler 9,1m x 8,8m x 1,5m	
C	0 t	No	Yes	Support 12,6m x 12,6m	
D	20 t	Yes	Yes	Support 13,0m x 13,0m	
	110t	No	Yes	Support 12,6m x 12,6m	
E	0 t	No	Yes	Support 16,0m x 10,5m	Load to the side
F	0 t	No	Yes	Support 16,0m x 10,5m	Load 360°
G	20 t	Yes	Yes	Support 16,0m x 12,0m	Load to the side
H	20 t	Yes	Yes	Support 16,0m x 12,0m	Load 360°

operating modes (e.g. TK) a hydraulic hose drum is not absolutely essential. In the event that the hose drum is nevertheless mounted, it is imperative that the corresponding weight in the actual load is taken into consideration!

10.5.1.2 Luffing the main boom



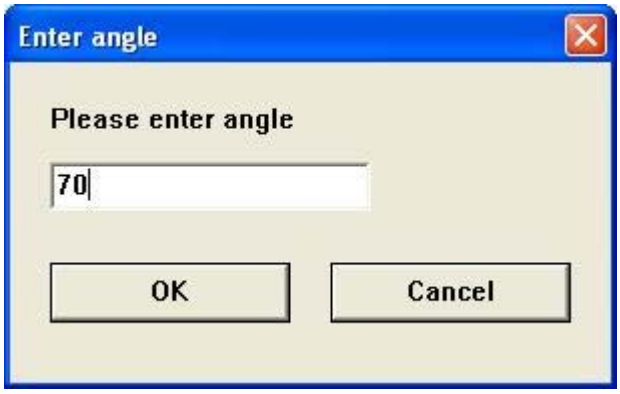
In the symbol for the radius, the main mast can be luffed up or down by pressing the mouse buttons. The luffing up and down movement is automatically stopped when a LML-Stop occurs, either due to overload or by exceeded the angle. For this purpose, the load moment limiter (LML) was copied from the LICCON. If a stop occurs, then this is shown with a **red STOP symbol**.

The LML can be turned on or off at any time via the 

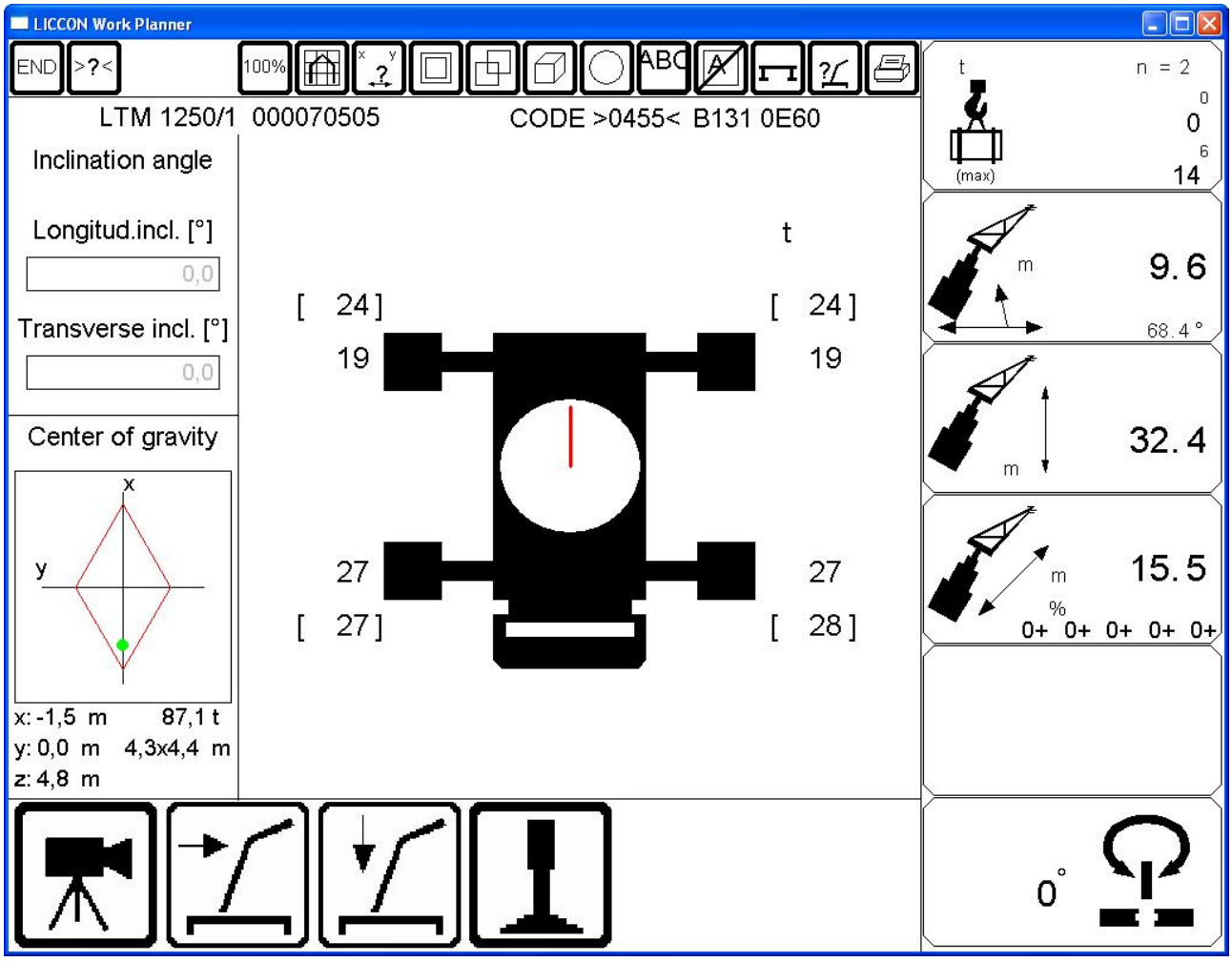
icon.

By default, luff up or down in 1° steps.
The step width can be increased to 10° steps by clicking the mouse buttons in combination with the SHIFT key.
The step width can be decreased to 0.1° steps by clicking the mouse buttons in combination with the STRG key.

If you click alternately with the mouse into the right half of the symbol, then you can enter the main boom angle directly via a dialog box.



10.5.2.3.1 Support pressure



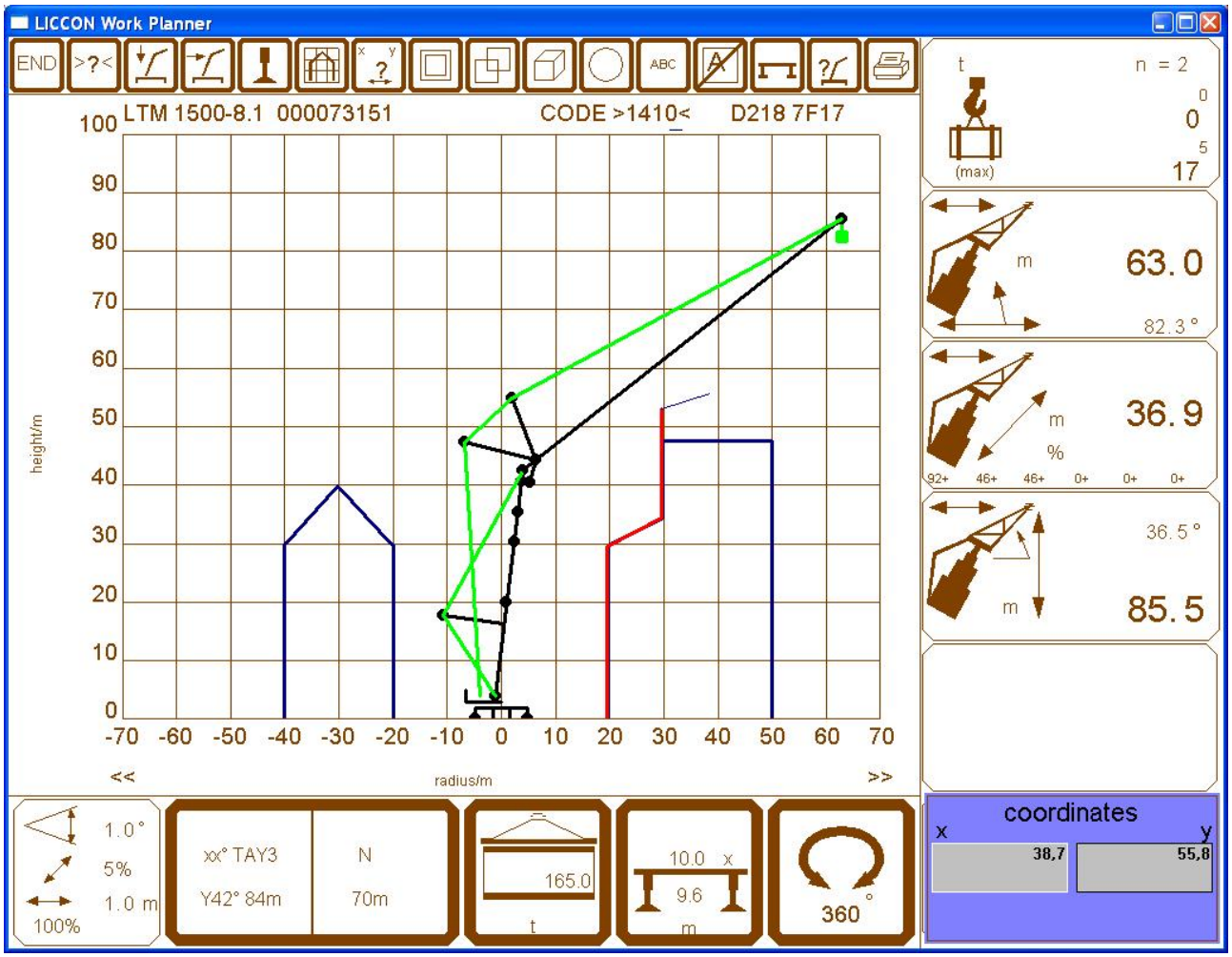
On the individual supports, the support pressures are noted in tons. The values in parenthesis show the maximum pressures, which would occur at a full 360° rotation of the slewing ring. In the symbol on the bottom right, the actual superstructure angle is shown in relation to 0° to the rear. Point the mouse pointer in the symbol and turn the superstructure with the left or right mouse button, the support pressures are continually updated. All crane movements can also be performed in the support pressure view, and the effects of these movements on the outriggers can be seen immediately.

In addition, the percentile data regarding the extension condition of the supports is available for LICCON 2 cranes. By clicking with the mouse on the percentile data, the corresponding support can be retracted or extended. In that case, the support pressures change.

The possibility to adjust the support base individually, deviating from the set up condition, has only an informative character. For crane operation, the currently set support base must match the support base which was set with the set up key. This is always the case when all percentage data is shown in green.

10.5.2.4 Draw an intrusion contour

The planner makes it possible for you to draw an interference outline in the crane view, which is taken into account for the **automatic crane selection**. It is possible to draw a traverse with the mouse or by entering the coordinates. With the right mouse button, click on the corresponding icon in the status and symbol line. Move the mouse to the starting point of the outline. Click on the left mouse button to mark the first point. Move the mouse now to all the following points and always press the left mouse button to set the point. Leave the drawing mode with the ESC button or the right mouse button.



Alternatively, you can draw the contour by entering the coordinates. Enter all coordinates in sequence and confirm every entry with the RETURN key. The contour will be stored after leaving the program and can be recalled at anytime. It remains stored until a new contour is entered. To delete the contour, call up the function and then press the ESC key.